

Patent Claims

- 5 1. Use of one or more compounds selected from compatible solutes for inhibiting the release of ceramides.
2. Use of one or more compounds selected from compatible solutes for the prophylaxis and protection of human skin against premature skin ageing.
- 10 3. Use of one or more compounds selected from compatible solutes according to at least one of the preceding claims for the prophylaxis and protection of human skin against wrinkling.
- 15 4. Use according to at least one of the preceding claims, characterised in that the release of ceramides is induced by free radicals or UV light.
- 20 5. Use according to at least one of the preceding claims, characterised in that inhibiting the release of ceramides prevents the expression of matrix metalloproteinases.
- 25 6. Use according to at least one of the preceding claims, characterised in that increased degradation of collagen fibres of the skin is avoided.
- 30 7. Use according to at least one of the preceding claims, characterised in that the inhibiting of the release of ceramides prevents the expression of pro-inflammatory proteins.
8. Use according to Claim 7, characterised in that the pro-inflammatory protein is the ICAM-1 gene.

9. Use according to Claim 1, 4, 7 or 8, characterised in that inhibiting the release of ceramides prevents the formation of reactive oxygen species.

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10. Use according to at least one of the preceding claims, characterised in that the release of ceramides is inhibited in people with photodermatoses.

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11. Use according to Claim 10, characterised in that the photodermatoses are selected from polymorphic photodermatosis, lupus erythematoses and light urticaria.

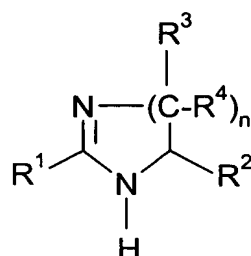
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12. Use according to at least one of the preceding claims, characterised in that the compatible solutes are in the form of a cosmetic, dermatological or pharmaceutical composition.

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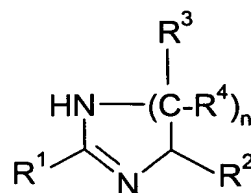
13. Use according to at least one of the preceding claims, characterised in that the compatible solutes are selected from the compounds of the formulae Ia and Ib

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Ia

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Ib,

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the physiologically tolerated salts of the compounds of the formulae Ia and Ib, and the stereoisomeric forms of the compounds of the formulae Ia and Ib, where

⁵ R¹ is H or alkyl,

R^2 is H, COOH, COO-alkyl or CO-NH- R^5 ,

10 R³ and R⁴ are each, independently of one another, H or OH,

n is 1, 2 or 3,

alkyl is an alkyl radical having from 1 to 4 carbon atoms, and

R⁵ is H, alkyl, an amino acid residue, a dipeptide radical or a tripeptide radical.

20 14. Use according to Claim 13, characterised in that the compounds are selected from the compounds of the formulae Ia and Ib selected from the compounds (S)-1,4,5,6-tetrahydro-2-methyl-4-pyrimidinecarboxylic acid and (S,S)-1,4,5,6-tetrahydro-5-hydroxy-2-methyl-4-pyrimidinecarboxylic acid.

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15. Use according to at least one of the preceding claims, characterised in that the proportion of compatible solutes in the composition is from 0.001 to 50% by weight, based on the composition as a whole.

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16. Use of compatible solutes for the preparation of a composition suitable for the prophylaxis and protection of the human skin against wrinkling.

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17. Use of compatible solutes for the preparation of a composition which are suitable for the prophylaxis and protection of human skin against premature skin ageing.
- 5 18. Use of compatible solutes for the preparation of a composition suitable for the prophylaxis or treatment of photodermatoses.
- 10 19. Use of compatible solutes for the preparation of a composition suitable for the prophylaxis or treatment of polymorphic photodermatosis, lupus erythematodes and/or light urticaria.
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